



ocket No. 2565-0136P

Application No. 09/202,070

### **APPENDIX OF CLAIMS**

2. The wafer according to claim 42, wherein a length of the at least one upper electrode is dependent upon the position at which the film acoustic wave device is mounted on the wafer.

3. The wafer according to claim 42, wherein a width of the upper electrode is dependent upon the position at which the film acoustic wave device is mounted on the wafer.

4. The wafer according to claim 42 further including a plurality of upper electrodes, wherein  
distances between each of the plurality of upper electrodes are dependent upon the position at which the film acoustic wave device is mounted on the wafer.

5. The wafer according to claim 42 further comprising:  
a bonding pad for connecting with the at least one upper electrode,  
wherein  
the pattern shape of the film acoustic wave device is formed by at least the ground electrode, the piezoelectric thin film, the at least one upper electrode, and the bonding pad, and wherein

a shape of the bonding pad is dependent upon the position at which the film acoustic wave device is mounted on the wafer.

6. The wafer according to claim 5 further comprising:

a connecting pattern for connecting the upper electrode with the bonding pad, wherein

the pattern shape of the film acoustic wave device is formed by at least the ground electrode, the piezoelectric thin film, the at least one upper electrode, the bonding pad, and the connecting pattern, and wherein

a shape of the connecting pattern is dependent upon the position at which the film acoustic wave device is mounted on the wafer.

7. The wafer according to claim 6, wherein the connecting pattern forms an air bridge.

8. The wafer according to claim 42 further comprising:

a capacitor provided on the same wafer as the film acoustic wave device, wherein

a capacitance of the capacitor is dependent upon the position at which the film acoustic wave device is mounted on the wafer.

9. The wafer according to claim 42, wherein the wafer is made of gallium arsenide (GaAs), the piezoelectric thin film is made of lead titanate ( $\text{PbTiO}_3$ ), and at least one upper electrode is a conductor substantially made of platinum (Pt).

10. The wafer according to claim 42, wherein the wafer is made of silicon (Si), the piezoelectric thin film is made of lead titanate ( $\text{PbTiO}_3$ ), and at least one upper electrode is a conductor substantially made of platinum (Pt).

11. The wafer according to claim 42, wherein the piezoelectric thin film is made of PZT ( $\text{PbTiO}_3\text{-PbZrO}_3$ ), and at least one upper electrode and the ground electrode is a conductor substantially made of platinum (Pt).

12. The wafer according to claim 42, wherein the piezoelectric thin film is made of zinc oxide ( $\text{ZnO}$ ).

13. The wafer according to claim 42, wherein the piezoelectric thin film is made of aluminum nitride ( $\text{AlN}$ ).

14. The wafer according to claim 42 further comprising:  
an inductor positioned between the wafer and the ground electrode.

42. A wafer having a plurality of acoustical wave devices formed thereon and exhibiting common operational characteristics, each of said acoustical wave devices comprising:

a ground electrode formed on the wafer;

a piezoelectric thin film formed on the ground electrode, wherein the piezoelectric thin film varies in at least one characteristic across the wafer; and

at least one upper electrode formed on the piezoelectric thin film;

wherein at least the ground electrode, the piezoelectric thin film and the at least one upper electrode form components in each of the plurality of acoustical wave devices; and

wherein at least one component in some of the plurality of acoustical wave devices is modified in its operational characteristic to compensate for the variation in the at least one characteristic of the piezoelectric thin film and is based on the location of the at least one acoustical wave devices on the wafer.

43. The wafer of claim 42, wherein the varied characteristic of the piezoelectric thin film is thickness.

44. The wafer of claim 43, wherein the piezoelectric thin film is thicker in the middle of the wafer and becomes thinner as it extends out towards the periphery of the wafer.

45. A plurality of acoustical wave device chips formed from a common wafer, each chip comprising:

- a ground electrode formed on the wafer;
- a piezoelectric thin film formed on the ground electrode, wherein the piezoelectric thin film varies in at least one characteristic across the wafer; and
- at least one upper electrode formed on the piezoelectric thin film;

wherein at least the ground electrode, the piezoelectric thin film and the at least one upper electrode form components of the plurality of acoustical wave devices; and

wherein at least one component in at least some of the plurality of acoustical wave devices is modified in its operational characteristic to compensate for the variation in the at least one characteristic of the piezoelectric thin film and is based on the location of the at least one acoustical wave devices on the wafer.

46. The wafer of claim 45, wherein the varied characteristic of the piezoelectric thin film is thickness.